CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 30 (Cancelled)

31. (Currently Amended) A method, comprising:

exciting a gain medium having an active region to generate an optical beam along an optical path;

feeding back a portion of the optical beam as a feedback optical beam to the active region;

deviating a nominal operating setting of an optical element positioned in the optical path to generate a wavelength deviation of the feedback optical beam, the wavelength deviation of the feedback optical beam to induce a voltage change across the active region of the gain medium;

sensing the voltage change across the active region of the gain medium ~~induced in response to the deviating~~;

generating an error signal in response to the sensed voltage change; and

adjusting the nominal operating setting of the optical element in response to the error signal to tune the optical element.

32. (Previously Presented) The method of claim 31 wherein the gain medium comprises a semiconductor gain medium.

33. (Previously Presented) The method of claim 32 wherein deviating the nominal operating setting of the optical element includes dithering the nominal operating setting.

34. (Previously Presented) The method of claim 32 wherein deviating the nominal operating setting of the optical element includes deviating a nominal operating position of the optical element.

35. (Previously Presented) The method of claim 32 wherein deviating the nominal operating setting of the optical element includes deviating a nominal index of refraction of the optical element.

36. (Previously Presented) The method of claim 32 wherein deviating the nominal operating setting of the optical element includes deviating a nominal voltage applied to the optical element.

37. (Previously Presented) The method of claim 32 wherein deviating the nominal operating setting of the optical element includes deviating a nominal temperature of the optical element.

38. (Previously Presented) The method of claim 32 wherein the optical element is one of an end mirror of the cavity, a grid generator, and a channel selector.

39. (Currently Amended) The method of claim 32 wherein adjusting the nominal operating setting includes adjusting the nominal operating setting to reduce a voltage sensed across the gain medium.

40. (Previously Presented) The method of claim 31, further comprising:

deviating a plurality of nominal operating settings of a corresponding plurality of optical elements of the cavity to induce the voltage change across the gain medium; and

adjusting the plurality of nominal operating settings of the corresponding plurality of optical elements in response to the sensed voltage to tune the plurality of optical elements.

41. (Previously Presented) The method of claim 40 wherein the plurality of nominal operating settings are deviated and adjusted sequentially.

42. (Previously Presented) The method of claim 40 wherein the plurality of nominal operating settings are deviated and adjusted simultaneously.

43. (Currently Amended) A laser apparatus, comprising:

a gain medium having an active region to emit an optical beam along an optical path;

first and second reflectors positioned in the optical path and defining a laser cavity, the first reflector to reflect a portion of the optical beam as a feedback optical beam to the active region;

a voltage sensor operatively coupled to the gain medium to monitor voltage across the active region; [[and]]

an optical element positioned in the optical path to induce a wavelength deviation in the feedback optical beam, the wavelength deviation of the feedback optical beam to induce a voltage change across the active region; and

a control system operatively coupled to the voltage sensor and to [[an]]the optical element ~~positioned in the optical path~~, the control system to deviate a nominal operating setting of the optical element to induce the wavelength deviation~~a voltage change across the gain medium and~~, the control system further to adjust the nominal operating setting in response to the voltage change to tune the optical element.

44. (Currently Amended) The laser apparatus of claim 43 wherein the control system further to dither the nominal operating setting to induce a modulated voltage across the active region~~gain medium~~ and to adjust the nominal operating setting in response to the modulated voltage to tune the optical element.

45. (Previously Presented) The laser apparatus of claim 44 wherein the control system comprises:

a dither element to dither the nominal operating setting of the optical element; and

an adjustment element to adjust the nominal operating setting of the optical element.

46. (Previously Presented) The laser apparatus of claim 44, further comprising:

a plurality of optical elements positioned in the optical path having a corresponding plurality of nominal operating settings, the control system operatively coupled to each of the plurality of optical elements to deviate the corresponding plurality of nominal operating settings to induce the voltage change across the gain medium and to adjust the plurality of nominal operating settings in response to the voltage change to tune the plurality of optical elements.

47. (Previously Presented) The laser apparatus of claim 46 wherein the control system to deviate and to adjust the plurality of nominal operating settings sequentially.

48. (Previously Presented) The laser apparatus of claim 46 wherein the control system to deviate and to adjust the plurality of nominal operating settings simultaneously.

49. (Previously Presented) The laser apparatus of claim 43 wherein the optical element comprises the first reflector.

50. (Previously Presented) The laser apparatus of claim 43 wherein the optical element comprises one of a grid generator, a channel selector, and an electro-optic tuning element.

51. (Previously Presented) The laser apparatus of claim 43 wherein the nominal operating setting includes one of a nominal operating position of the optical element, a nominal voltage applied to the optical element, and a nominal temperature of the optical element.

52. – 54 (Cancelled)

55. (Previously Presented) The laser apparatus of claim 43 wherein the second reflector comprises a partially reflective facet formed on the gain medium.

56. (New) An apparatus, comprising:

means for generating an optical beam along an optical path;

means for feeding back a portion of the optical beam as a feedback optical beam to the means for generating;

means for deviating a nominal operating setting of an optical element positioned in the optical path to generate a wavelength deviation of the feedback optical beam, the wavelength deviation of the feedback optical beam to induce a voltage change across the means for generating;

means for sensing the voltage change across the means for generating the optical beam;

means for generating an error signal in response to the sensed voltage change; and

means for adjusting the nominal operating setting of the optical element in response to the error signal to tune the optical element.

57. (New) The apparatus of claim 56 wherein the means for deviating the nominal operating setting comprises a means for deviating a nominal operating position of the optical element to generate the wavelength deviation of the feedback optical beam, the optical element comprising an end reflector for feeding back the feedback optical beam.

58. (New) The apparatus of claim 56 wherein the means for deviating the nominal operating setting comprises a means for deviating an index of refraction of the optical element to generate the wavelength deviation of the feedback optical beam.

59. (New) The apparatus of claim 58 wherein the means for deviating the index of refraction of the optical element comprises a means for applying an adjustable voltage across the optical element.

60. (New) The apparatus of claim 58 wherein the means for deviating the index of refraction of the optical element comprises a means for deviating a temperature of the optical element.